UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/551,760	04/18/2000	Richard J. Proctor	P/61741	2246

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EXAMINER
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ART UNIT	PAPER NUMBER
2662	

DATE MAILED: 03/17/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _30 January 2004_.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _72-106_ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _72-74, 77-79, 81, 82, 84-90, 93-95, 97-98, 100-104, and 106_ is/are rejected.

7)☒ Claim(s) _75,76,80,83,91,92,96,99 and 105_ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

2.   Claims 72-74, 77-79, 81, 82, 84-90, 93-95, 97-98, 100-104, and 106 are rejected under 35

U.S.C. 103(a) as being unpatentable over Westburg et al. (US 5,946,309).

3.   Regarding claims 72, 82, 88, 98, and 106, Westburg et al. discloses a system that can

generate more than one data stream, multiplex them together over a transmission line, and then

be demultiplexed at a receiving station. If ATM is to be used for transporting data of different

applications, then an ATM adaptation layer (AAL) must be used. The AAL reformats the data

so the data is compatible with the ATM protocol. The ATM layer then transmits the ATM cells

containing the reformatted data to a receiving station. Two of the most commonly known AALs

are designated AAL1 and AAL5. Another AAL layer, AALm, is used to transport small data

packets known as microcells—AALm can be considered the same as AAL2. For the purposes of

this rejection, ATM cells that contain AAL1 and AAL5 data will be considered "data traffic

comprising data in ATM form" while ATM cells that contain AAL2 data will be considered

"data traffic comprising data in AAL2 form". See col. 1, lines 1-56. Fig. 3 shows how an AAL

mux works to send data over the transmission channel. The system includes a receiving station

(a higher layer device), which contains the layers shown in Fig. 2 in order to operate, and a

transmitting station (a common device). See col. 3, line 57-col. 4, line 14. Control data and

communications data can be sent over the same line, but they can also be sent over different

channels, as shown by the dashed line 345 (a bus including lines for carrying data and control

signals). At the AAL demux, the control logic extracts the control data and directs the

communication data stored in the various ATM cells to the appropriate AAL layers (e.g., AAL1,

AAL5, AALm). See at least Fig. 20. In order to perform the step of directing the

communication to the proper layer destination, the demux device must inherently be able to

discriminate between the different types of data traffic (the devices including discrimination

means for discriminating between the two forms of data traffic). Also, Fig. 17 shows a format of

a microcell. As shown in Fig. 17, each microcell contains a header portion 1705, which contains

an 8 bit connection identifier code (CID) 1715 (mini-cell associated with a means of

identification of at least one of a source and a destination of the mini-cell). See col. 7, lines 55-

60. Westburg et al. does not expressly disclosing having a plurality of common devices and a

plurality of higher level devices in the system. However, it would have been obvious to a person

of ordinary skill in the art at the time of the invention to include more than one transmitting

station and more than receiving station in the system setup so that there could be a plurality of

both kinds of devices. One of ordinary skill in the art would have been motivated to do this

because having a plurality of transmitters and receivers would be desirable in a system where

there are multiple users and destinations.

4.   Regarding claims 73 and 89, as mentioned previously, the identification is included in the

microcell header portion. Also, Westburg et al. also discloses that an ATM cell header may be

used to identify the source and destination of the communication data contained in the data

payload. See col. 4, lines 64-67.

5.   Regarding claims 74, 90, and 104, Westburg et al. discloses that the ATM header

includes a Virtual Path Identifier Code and a Virtual Channel Identifier code. These codes

indicate the connection associated with the data stored in the ATM cell payload—since the

AAL2 data is associated with ATM cell headers, it also has the VPI and VCI information

attached to it. See col. 4, lines 27-45.

6.   Regarding claim 77, Figs. 1 and 2 show that the layers, which are associated with the

common device and the higher layers devices, include a physical layer as well as ATM and

AALm layers.

7.   Regarding claims 78 and 93, as mentioned previously, the AAL demux extracts

information from the control signals to determine how to direct the data to the correct layer,

where the particular layer can be considered a destination.

8.   Regarding claims 79 and 95, Westburg et al. discloses that the control data can be

inserted into the start pointer of a microcell (control signal is a start of the cell signal). See claim

6.

9.   Regarding claims 81 and 97, Westburg et al. discloses that control data can be sent in the

form of resource management ATM cells, which are separate from communications data cells.

These cells act as a separate "signal". See col. 5, lines 5-20.

10.   Regarding claims 84, 85, 100, and 101, as mentioned previously, Westburg et al.

discloses a CID contained in the structure of the microcell. Westburg et al. also discloses that

microcells and ATM cells are physically similar to each other, so this CID also exists in the

regular ATM cells. Westburg et al. does not expressly discloses where CID resides specifically

on the fifth octet, but it would have been obvious to have the CID of Westburg et al. be located

on the fifth octet. One would have been motivated to do this as a matter of design choice. It would be advantageous to have this type of information toward the front of the packet so that the system does not have to spend too much time traversing the packet to find this information.

11. Regarding claims 86, 87, 102, and 103, Westburg et al. does not expressly disclose lines for carrying address signals for selecting a device from the plurality of devices, but it would have been obvious to have an extra signal in Westburg et al. to determine to where the transmitter should be transmitting data to. One would have been motivated to do this because if there were multiple devices present, then it would be necessary to have some selecting function in order for the transmitter to send data to the correct destination.

12. Regarding claim 93, as shown in Fig. 1, a physical layer, ATM layer, and adaptation (e.g. AAL2) layer exist.

Allowable Subject Matter

13. Claims 75, 76, 80, 83, 91, 92, 96, 99, and 105 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

14. Applicant's arguments filed January 30, 2004 have been fully considered but they are not persuasive.

15. In response to Applicant's argument that the claims 72 and 88 provide a means that explicitly identifies and discriminates the *true* source or destination of the data,, the Examiner respectfully disagrees. As described by the Applicant in the response, Applicant tries to explain

how Westburg et al. is only able to identify the source and destination and how "identifying" is somehow different than "discriminating." The Examiner does not see how the two terms are different—if the demux is able to "identify" the type of traffic, it certainly also knows how to "discriminate" the traffic. Applicant also states in the second paragraph of the "Remarks" section that "like any mux/demux system, the arrangement of Westburg needs to be able to discriminate...," so Applicant himself admits that this discriminating capability exists in Westburg et al. Regarding the argument concerning the "true" source and destination, the claims, in fact, do not give any indication that the means must determine the *true* source and destination of the data. The specific layers, AAL1, AAL5, and AALm, can be understood as the destinations that the demux must direct the data. The data that is transferred in Westburg et al. must contain a field that identifies the type of data in order to enable the demux to route the data to the correct destination layer. Thus, Westburg et al. does disclose the capability to discriminate the types of data in order to send to their destinations.

Conclusion

16.   Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Timothy Lee whose telephone number is (703)305-7349. The examiner can normally be reached on M-F, 9-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Kizou can be reached on (703)305-4744. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TLL
Timothy Lee
March 30, 2004

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